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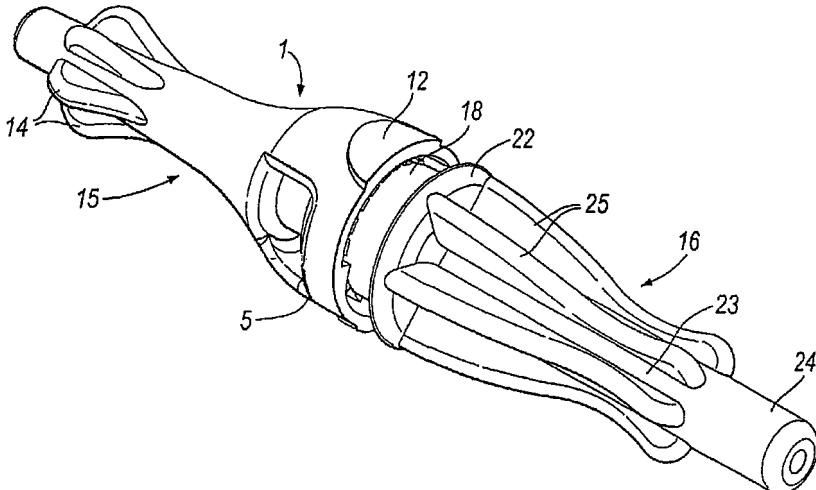
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[Continued on next page]

(54) Title: COUPLING FOR MEDICAL FLUID DELIVERY SYSTEMS



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(57) Abstract: A coupling for a medical fluid delivery system for administering liquids to a patient includes male and female members, the female member (1) having an inwardly tapering socket (3) for receiving a complimentary tubular spigot (17) of the male member and having a liquid escape vent (9) for escape of liquid supplied from an incorrect or an incorrectly coupled male member. A collar (18) of the male member is threadedly engageable with a hub (2) of the female member for securing the members against disengagement, and the female member has a sleeve (5) with a pawl (6) which cooperates with ratchet teeth (20) on the collar to lock the collar against rotation, the pawl being disengageable by squeezing the sleeve (5). The sleeve (5) has openings (8) to permit treatment of the hub and sleeve interior for destroying bacteria. The male member may be provided at the forward end of a syringe (34). The male and female members have in their gripping regions similar external profiles defined by radial wings (14, 25, 39) to provide a clear tactile indication that the correct parts are being used together.

**Published:**

- *with international search report*
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 02/04008

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M39/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 633 039 A (STERIMED GMBH) 11 January 1995 (1995-01-11) figures 1,2 ----	1-3
A	US 6 217 564 B1 (KERR JAMES WILLIAM ET AL) 17 April 2001 (2001-04-17) the whole document	1-3
X	column 3, line 57 -column 4, line 40; figures 1-3 ----	4-15,17
A	EP 1 050 318 A (SAF T MED INC) 8 November 2000 (2000-11-08) column 2, line 50 -column 3, line 19; figures 5,7 column 4, line 46-51 ----	4-15,17
	-/-	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention ;

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the International search

21 February 2003

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INTERNATIONAL SEARCH REPORT

International Application No

PCT 02/04008

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 37356 A (PETERS JOSEPH LENNOX) 29 July 1999 (1999-07-29) page 3, line 14 -page 5, line 18; figures 1-3 ----	4-15,17
A	GB 2 131 510 A (GILSTON ALAN) 20 June 1984 (1984-06-20) the whole document -----	4-15,17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 02/04008

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: 19-22 because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-15, 17

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-3

Female coupling member for a medical fluid delivery system, the coupling member comprising a hub with a socket recess having an open end and an interior surface tapering inwardly from the open end and a liquid escape vent open at the tapering surface adjacent the open end.

2. Claims: 4-15,17

Male coupling member for a medical fluid delivery system, the coupling member comprising a tubular spigot, a collar coaxially surrounding the spigot, a screw thread on the interior of the spigot and a large number of ratchet teeth disposed around the exterior of the collar, the same claims also essentially defining a coupling comprising said male coupling member and a female coupling member with a hub having a socket with a sealing surface tapering axially inwardly from the open end, the female member having a sleeve surrounding the hub and comprising a pawl element provided on the inner surface of the sleeve.

3. Claim : 16

Female coupling member for a medical fluid delivery system, the coupling member having a hub with a socket, a securing member on the exterior of the hub, a sleeve surrounding the hub and comprising an opening and a locking pawl on the interior of the sleeve.

4. Claim : 18

Stylet holder for use with a female coupling member of claims 1-5 or 16, the holder having a rear face with radial lugs protruding axially therefrom.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB 02/04008

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 19-22

The reference to the description and drawings renders the subject matter of claims 19-22 totally unclear.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat'l Application No
PCT/GB 02/04008

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 0633039	A	11-01-1995		DE 4322868 A1 DE 9320713 U1 EP 0633039 A1		12-01-1995 02-03-1995 11-01-1995
US 6217564	B1	17-04-2001		DE 69518740 D1 DE 69518740 T2 EP 0998956 A2 EP 0743868 A1 ES 2153023 T3 WO 9522369 A1 JP 9508840 T US 5830195 A		12-10-2000 31-05-2001 10-05-2000 27-11-1996 16-02-2001 24-08-1995 09-09-1997 03-11-1998
EP 1050318	A	08-11-2000		US 6224588 B1 EP 1050318 A1		01-05-2001 08-11-2000
WO 9937356	A	29-07-1999		AU 750271 B2 AU 2175499 A BR 9907159 A CN 1288392 T EP 1049514 A1 WO 9937356 A1 JP 2002500935 T US 6508807 B1		11-07-2002 09-08-1999 24-10-2000 21-03-2001 08-11-2000 29-07-1999 15-01-2002 21-01-2003
GB 2131510	A	20-06-1984		NONE		